



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/781,840

02/20/2004

Mikhail Belenkii

518

5474

7590

05/19/2009

John R. Ross  
TREX ENTERPRISES  
10455 PACIFIC CENTER CT.  
SAN DIEGO, CA 92121

EXAMINER

PASCAL, LESLIE C

ART UNIT

PAPER NUMBER

2613

MAIL DATE

DELIVERY MODE

05/19/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/781,840	<b>Applicant(s)</b> BELENKII ET AL.	
	<b>Examiner</b> Leslie Pascal	<b>Art Unit</b> 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 2613

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-10 and 12-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In regard to claims 1 and 13, "A range of direction of at least +/- 20 degrees" is not disclosed in the specification in such a way that someone of ordinary skill in the art would know how to make and/or use the invention. It is unclear what is meant by "range of direction". This is not adequately disclosed in the specification. The specification does not teach what this means. A range of direction of at least +/- 20 degrees is not adequately disclosed. Likewise, with regard to claim 10, "A range of direction of at least +/- 60 degrees" is not disclosed in the specification in such a way that someone of ordinary skill in the art would know how to make and/or use the invention. It is unclear what is meant by "range of direction". A range of direction of at least +/- 60 degrees is not adequately disclosed. In regard to claim 2, the specification does not teach "at least 75 percent of light in a predetermined wavelength range illuminating said aperture" and further "within said range of direction is reflected back toward said light source with a divergence of less than +/-1.0 degrees". In regard to claim 3, the specification does not teach "at least 90 percent of light in a predetermined wavelength range illuminating said aperture" and further "within said range of direction

Art Unit: 2613

is reflected back toward said light source with a divergence of less than  $\pm 0.001$  degrees". In regard to claims 6 and 9, the specification does not teach "said clear aperture defines a diameter and said lens defines a diameter and the diameter of the clear aperture is at least  $1/3$  the lens diameter". The specification does not teach how these limitations are provided. Since it does not teach these limitations in the specification, it is unclear what benefit they provide or why they are critical to the invention.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: In regard to claims 1 and 13, "A range of direction of at least  $\pm 20$  degrees" is not disclosed in the specification. Likewise, with regard to claim 10, "A range of direction of at least  $\pm 60$  degrees" is not disclosed in the specification. In regard to claim 2, the specification does not teach "at least 75 percent of light in a predetermined wavelength range illuminating said aperture" and further "within said range of direction is reflected back toward said light source with a divergence of less than  $\pm 1.0$  degrees". In regard to claim 3, the specification does not teach "at least 90 percent of light in a predetermined wavelength range illuminating said aperture" and further "within said range of direction is reflected back toward said light source with a divergence of less than  $\pm 0.001$  degrees". In regard to claims 6 and 9, the specification does not teach "said clear aperture defines a diameter and said lens defines a diameter and the diameter of the clear aperture is at least  $1/3$  the lens diameter". Although the original claims disclose this subject matter, and therefore, may be added to the

Art Unit: 2613

specification in order to provide proper antecedent basis for the claims. The original specification does not teach these specific limitations, how they are provided and why they are a benefit to the invention. Although this issue is addressed in the art rejection, it appears that the applicant feels that they are just obvious design choices based on the lack of disclosure (the lack of disclosure is a 112 problem).

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-10 and 12-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claims 1 and 13, "A range of direction of at least +/- 20 degrees" is not disclosed in the specification in such a way that someone of ordinary skill in the art would know how to make and/or use the invention. It is unclear what is meant by "range of direction" in claims 1, 10 and 13.

6. Claims 1-10 and 12-13 and rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: In regard to claims 1 and 13, the preamble of the claim mentions a clear aperture. The aperture is never tied to any means in the claim. In regard to claims 2-3, 6 and 9; details of the aperture are claimed. These limitations lack clear antecedent basis because the aperture is never positively claimed in relation to the elements of the claims.

Art Unit: 2613

7. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 10 which has dependency on 1 and includes all limitations of claim 1 recites the broad recitation of a range of directions of at least +/- 20 degrees (in claim 1), and the claim also recites a range of directions of at least +/- 60 which is the narrower statement of the range/limitation.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3 rejected under 35 U.S.C. 103(a) as being unpatentable over applicants' admitted prior art.

Art Unit: 2613

In prior art figure 1, there is a compound lens system (6, 8) which has a focal surface (on 10), which has a locus of focal points (3 points shown on element 10) which has a range of direction of at least  $\pm 20$  degrees (this is made in view of the 112 rejections above). It appears that the signals can be received by at least 20 degrees although it is not clear what range of direction means. The prior art figure teaches a mirror co-located with the focal surface (reflective coating). In regard to claims 2-3, in that the applicant has not taught these specifics, it would appear that the applicant feels that they are so obvious that he does not have to disclose them (the percentages and divergence degrees). Although the prior art figure does not teach a housing, it is well known to place retro-reflectors in housings and would have been obvious in the prior art system in order to protect the components from the elements and interfering light.

10. Claims 1-10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbreath et al (6154299) in view of Eastman (4422764).

See figure 6 of Gilbreath et al. He teaches a lens (402) and a mirror (404). He teaches the position of the focal spot will change with incident angle (locus of focal points). Although Gilbreath does not teach specifics about his lens, Eastman teaches a lens with mirror in a retro-reflector. He teaches that the lens may be a compound lens. It would have been obvious to use a compound lens in the system of Gilbreath as taught is well known in the same field of endeavor by Eastman. Although Gilbreath does not specifically teach housing, Eastman teaches housing. It would have been obvious to place the retro-reflector of Gilbreath et al in housing as taught by Eastman in order to protect it from the elements. In regard to claims 2-3, in that the applicant has not taught

Art Unit: 2613

these specifics, it would appear that the applicant feels that they are so obvious that he does not have to disclose them (the percentages and divergence degrees). It would appear that the lens has a range of direction of at least  $\pm 20$  degrees (this is made in view of the 112 rejections above). It appears that the signals can be received by at least 20 degrees although it is not clear what range of direction means. In regard to claims 5 and 8, see column 5, lines 19-35. In regard to the interrogation source of claims 4 and 7, see the interrogation in the abstract. In regard to claims 6 and 9, in that the applicant has not taught these specifics, it would appear that the applicant feels that they are so obvious that he does not have to disclose them (clear aperture is at least  $1/3$  the lens diameter). In regard to claim 13, see figure 7. In regard to claim 12, at least one of the retro-reflective pairs could be considered to be "untilted".

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gutlin (667129) teaches a retro reflector with different focal points. Thirsrup (2005/0018194) et al, Sayyah et al (2006/0239696) and Dellaire (4855915) teach a retro reflector.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie Pascal whose telephone number is 571-272-3032. The examiner can normally be reached on Monday- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2613

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Leslie Pascal/  
Primary Examiner  
Art Unit 2613